CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 98-101
NPDES NO. CA0028282

ASTORIA METAL CORPORATION
HUNTERS POINT
SAN FRANCISCO COUNTY

U.S. NAVY ENGINEERING FIELD ACTIVITY-CARETAKER SITE OFFICE
HUNTERS POINT
SAN FRANCISCO COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter called the Board) finds that:

1. Astoria Metal Corporation, hereinafter called the discharger, has applied for reissuance of waste discharge requirements and a permit to discharge waste into Lower San Francisco Bay under the National Pollutant Discharge Elimination System (NPDES). The discharger also submitted a revised application to reflect the facility's new operation procedures.

2. **Site Location:** The site is located at Building 367 in Hunter Point Shipyard. It was formerly know as Hunters Point Dry Dock #4. The site is immediately adjacent to San Francisco Bay.

3. The effluent limit for copper in the Effluent Limitations section is based on 4.9 µg/l copper criterion as an interpretation of the narrative toxicity objective in the Basin Plan, based on best professional judgment. From a technical standpoint, 4.9 µg/l is currently the best available criterion that is protective of the most sensitive designated use of San Francisco Bay marine waters with respect to copper: habitat for aquatic organisms. The criterion is based on the Regional Board's study to develop a site - specific objective for copper, which employed the "water effect ratio" approach developed by the USEPA. This approach provides a measure of the binding capacity of natural waters (dependent on particulate matter) relative to the binding capacity of reference waters (filtered oceanic water). The study and associated staff analysis are described in a September 25, 1992, Board staff report entitled "Revised Report on Proposed Amendment to Establish a Site Specific Objective for Copper for San Francisco Bay." All other effluent limits in the Effluent Limitations Section are based on the objectives listed in Table 3.3 of the "San Francisco Bay Basin Water Quality Control Plan (Basin Plan)."

4. On November 22, 1997, Regional Board staff conducted a receiving water sampling at the facility. The results are as follows:

Constituent	Basin Plan Monthly Average Limit	Daily Maximum Limit	1995 RMP Result	North Pier Sampling Result	South Pier Sampling Result
Chromium	---	11 µg/l	0.89 µg/l	3 µg/l	< 2 µg/l
Copper	---	4.9 µg/l	1.91 µg/l	3 µg/l	12 µg/l
Lead	---	5.6 µg/l	0.19 µg/l	< 2 µg/l	< 2 µg/l
Tributyltin	0.005 µg/l	---	---	---	---
Zinc	---	58 µg/l	1.58 µg/l	10 µg/l	< 10 µg/l
Oil and Grease	10 mg/l	20 mg/l	---	---	---
Settleable Solids	0.1 mg/l-hr	0.2 mg/l-hr	---	---	---
Total Suspended Solids	30 mg/l	45 mg/l	3.60 mg/l	---	---

5. Wastewater sources such as contaminated stormwater, infiltrating groundwater, and valve and sluice gate leakage from surrounding U.S. Navy properties continuously flow into the dry docks. The flows are continuous and will be present when Astoria Metal Corporation (Astoria) operates the dry docks. The infiltrating groundwater is separated via a series of collection pipes and is discharged directly into the sanitary sewer.

6. Currently, there is not enough sampling data to demonstrate the quality of Astoria's discharge. Therefore, a comprehensive Self Monitoring Program (SMP) is included as part of this permit. The SMP will enable Astoria to fully characterize its discharge.

7. Named Dischargers: Astoria Metal Corporation operates the facility. Thus, Astoria is named as a primary discharger.

   This facility and the underlying property are owned by the U.S. Navy, who leased this facility to Astoria. The U.S. Navy is named as the secondary discharger since it is the property owner and it has control over the storm drains on Astoria's property.

   The U.S. Navy will be responsible for compliance with this order only if the Board or Executive Officer finds that Astoria has failed to comply with the requirements of this Order and the U.S. Navy has been given notice of the lack of compliance and an opportunity to obtain compliance by Astoria.

FACILITY DESCRIPTION

8. This facility is used for the dismantling and repair of vessels. The process varies by the type of vessel serviced and may include sandblasting and the removal of hazardous materials such as PCBs, asbestos, and paint.

9. Discharger dismantles and services vessels in a graving dock type dry dock.

   The dismantling process starts with pier side surveying for hazardous materials and initial cutting and metal removal. The ship is then towed into the dry dock for the remaining dismantling process. Once inside the dry dock, the ship will be cut into large pieces. These pieces are then lifted out of the dry dock and placed in a contained area north of the dry dock for further cutting. The wastes from this operation may include waste oil from the vessels, lubrication oil, metal particulate from the cutting process, anti-fouling agent used in vessel ballast and stormwater that comes in contact with the vessel and debris.

   The vessel repair process includes bringing the vessels into the dry dock for repair and maintenance of the ship hull, structures, mechanical parts, etc. This process may include sand blasting of the vessel. The wastes from this operation may include sand blasting grits, paint chips from the vessel contaminated with tributyltin (TBT), copper, lead, chromium, etc., waste oil, ballast water with anti-fouling agents, and stormwater that comes in contact with the vessel and debris.

   The vessel cleaning process includes bringing vessels into the dry dock for hull cleaning, which may including sand or hydro blasting of the ship hull. The wastes from this operation may include sand blasting grits, paint chips that may contain TBT, copper, lead, chromium, and stormwater that comes in contact with the vessel and debris.

   After each operation, the discharger sweeps and washes down the dry dock prior to opening the caisson to receive new vessels. This wash down water is discharged into the City of San Francisco's Southeast Treatment Plant via sanitary sewers. In addition to the wash down water, all process wastewater, infiltrating groundwater, and stormwater collected in the dry dock are also discharged into the sanitary sewers.

DISCHARGE DESCRIPTION

10. The discharge consists of up to 60 million gallons per cycle of Lower San Francisco Bay water used to carry ships in and out of dry docks. The discharger performs approximately four discharge cycles per year. There is no treatment prior discharge. Wastewater is discharged into Lower San Francisco Bay.

In addition to the Lower San Francisco Bay water, process water used in the ship dismantling and repair process, seepage water from the dry dock walls, seepage water from the caisson, and stormwater from certain portions of the site will also be collected in the dry dock sumps. These waters will not come in contact with the Lower San Francisco Bay water regulated by this permit. This water is discharged into the City of San Francisco's Southeast Treatment Plant through a separate sanitary sewer connection.

11. The waste produced from the discharger's operation consist of the following:

Waste 001 is an intermittent discharge used to carry the ships into Dry Dock No. 4. This discharge can become contaminated from contact with residual particulate from the operations listed in Finding No. 9.

Storm 001 - 028 are intermittent discharges of stormwater from the surrounding facility. These discharges can become contaminated from contact with residual particulate from the operations listed in Finding No. 9, and from equipment and scrap metal stored around the facility

APPLICABLE PLANS, POLICIES AND REGULATIONS

12. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on June 21, 1995. This updated and consolidated plan represents the Board's master water quality control planning document. The revised Basin Plan was approved by the State Water Resources Control Board (State Board) and the Office of Administrative Law on July 20 and November 13, respectively, of 1995. A summary of regulatory provisions is contained in Title 23 of the California Code of Regulations at Section 3912. The Basin Plan defines beneficial uses and water quality objective for waters of the State, including surface and groundwater.

13. Pursuant to 40 CFR 122.44, "Establishing Limitations, Standards, and Other Permit Conditions" NPDES permit should also include toxic pollutant limitations if the discharger uses or manufactures a toxic pollutant as an intermediate or final product or by product. This permit may be modified prior to the expiration date, pursuant to 40 CFR 122.62 and 124.5, to include effluent limitations for toxic constituents determined to be present in significant amounts in the discharge through the monitoring program included as part of this Order.

BENEFICIAL USES

14. The beneficial uses of Lower San Francisco Bay and contiguous water bodies are:

    a. Ocean, Commercial, and Sport Fishing
    b. Estuarine Habitat

c. Industrial Service Supply
d. Fish Migration
e. Navigation
f. Preservation of Rare and Endangered Species
g. Water Contact Recreation
h. Noncontact Water Recreation
i. Shellfish Harvesting
j. Wildlife Habitat

BASIS FOR REQUIREMENTS

15. The Basin Plan establishes a narrative objective for acute and chronic toxicity in the Bay. In part, it states that "All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms. Detrimental responses include but are not limited to, decreased growth rate and decreased reproductive success of resident or indicator species...."

16. Receiving water limitations in this Order are based on the plans, policies, and water quality objectives and criteria of the Basin Plan, applicable Federal Regulations (40 CFR Parts 122 through 131), and best professional judgment.

17. The discharger takes in Lower San Francisco Bay water in ambient condition and discharges the water within twenty-four hours, with the addition of residual particulate from ship dismantling process and contaminated stormwater, and valve and sluice gate leakage. There is a reasonable potential for the discharge to cause or contribute to exceedances of water quality objectives. Monitoring for these constituents is required to verify whether the chosen numeric effluent limitations are protective of the water quality objective when Astoria operates. A list of required detection limits is also included to ensure meaningful monitoring results. A reopener provision is part of this Order that requires the discharger to notify the Board of material changes in its manufacturing and treatment process and that would allow the Board to amend the permit as appropriate.

CEQA AND PUBLIC NOTICE OF ACTION

18. The issuance of waste discharge requirements for this discharge is exempt from the provisions of Chapter 3 (commencing with Section 21100 of Division 13) of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.

19. The Board has notified the discharger and interested agencies and persons of its intent to issue waste discharge requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

20. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED THAT the Discharger, in order to met the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, shall comply with the following

A. Discharge Prohibitions:

1. Direct discharge of domestic sanitary waste to surface Waters of the State is prohibited.

2. The direct discharge of particulate and paint residues from the dry dock, ships, or piers, to Waters of the State is prohibited.

3. The placement of spent abrasive and paint residue in areas where the materials may be washed into Waters of the State by stormwater runoff, or by tide or wave action is prohibited.

4. Discharges of wastewater, materials, or wastes other than stormwater which are not otherwise authorized by this Order, to a storm drain system or waters of the State are prohibited.

5. The discharge of floating oil or other floating materials from any activity that may cause deleterious bottom deposits, turbidity or discoloration in surface waters is prohibited.

6. Discharge of ship ballast water from the ships Astoria has control of outside of the dry docks is prohibited.

7. Discharge of pressure washing water, ballast water, boiler drainage water or any process water that is used or accumulated in the dry dock to Waters of the State during the dismantling or repair processes is prohibited.

8. During a storm event, Astoria shall not discharge any process water to the sewer systems of City of San Francisco unless specifically approved by the General Manager of the San Francisco Public Utilities Commission.

9. The storage of scrap materials from the dismantling process on or near the vicinity of the piers and storm drains that drain directly into Lower San Francisco Bay is prohibited.

B. Effluent Limitations:

1. The discharge of E-001 shall not contain constituents in excess of the following limits:

Constituents	Units	Monthly Average	Maximum Daily
Copper	µg/l	---	4.9
Tributyltin	µg/l	0.005	
Oil and Grease	mg/l	10	20
Settleable Solids	mg/l-hr	0.1	0.2
Total Suspended Solids	mg/l	30	45

2. The pH of E-001 shall not exceed 8.5 nor be less than 6.5 pH units.

3. The discharge from E-001 shall meet the following limits of toxicity:

   The survival of three-spine stickleback and sanddabs in a 96 hour static renewal bioassay of the effluent shall be a single sample maximum value of not less than 70 percent survival.

C. Receiving Water Limitations:

1. The discharge of waste shall not cause the following conditions to exist in Waters of the State at any place:

   a. Floating, suspended, or deposited microscopic particulate matter or foam;

   b. Bottom deposits or aquatic growths;

   c. Long term alteration of temperature, turbidity, or apparent color beyond present natural background levels;

   d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;

   e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge of waste shall not cause the following limits to be exceeded in Waters of the State in any place within one foot of the water surface:

   a. **Dissolved oxygen:** 5.0 mg/l minimum. Median of any three consecutive months shall not be less than 80% saturation. When natural factors cause lesser concentration(s) than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.

   b. **pH:** The pH shall not be depressed below 6.5 nor raised above 8.5 nor caused to vary from normal ambient pH levels by more than 0.5 units.

   c. **Un-ionized ammonia:** 0.025 mg/l as N annual median
   0.4 mg/l as N maximum

3. The discharge shall not cause a violation of any applicable water quality objective for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

D. Provisions:

1. **Stormwater Pollution Prevention Plan (SWPPP):** The discharger shall evaluate and update annually the SWPPP by July 1st of every year, or sooner if there is a change in the operation of the facility which may substantially affect the quality of the stormwater discharged from the facility. An annual compliance report acceptable to the Executive Officer documenting the progress and problems encountered with the implementation of the SWPPP during the previous year shall be submitted on the July 15th of every year. The tasks in the SWPPP shall include photographing the dry docks after the first storm event of the year. A copy of these photographs shall be included in the annual report.

2. **Best Management Plan (BMP):** The discharger shall update and submit a BMP acceptable to the Executive Officer by December 1, 1998. Specifically, the BMP shall be updated to include the notification to the Regional Board and the San Francisco Public Utilities Commission Bureau of Environmental Regulation and Management one week prior to opening of the caisson to receive another ship, and the prohibition of ship ballast water discharge outside the dry docks. It shall also include proper disposal of all wastewater produced by the ship service and dismantling

processes and photographing of the entire dry dock prior to opening the caisson. The updated BMP shall be implemented by January 1, 1999.

Henceforth, the discharger shall evaluate and update annually the BMP by July 1st of every year, or sooner if there is a change in the operation of the facility which may substantially affect the quality of the water discharged from the facility. An annual compliance report acceptable to the Executive Officer documenting the progress and problems encountered with the BMP during the previous year shall be submitted on July 15th of every year.

3. **Self-Monitoring Program:** The discharger shall conduct monitoring in accordance with the attached Self-Monitoring Program as adopted by the Board. The Self-Monitoring Program may be amended by the Executive Officer pursuant to 40CFR122.62, 122.63, and 124.5.

4. **Permit Reopener:** Pursuant to USEPA regulations 40 CFR 122.44, 122.62, and 124.5, the permit may be modified prior to the expiration date for reasons including:

   a. to add effluent limitations for toxic constituents determined to be present in significant amounts in the discharge through the monitoring program included as part of this Order.

5. **Signatory and Certification:** All applications, reports, or information submitted to the Regional Board shall be signed and certified pursuant to Environmental Protection Agency regulations (40 CFR 122.41K).

6. **Notification on Changes:** Pursuant to Environmental Protection Agency regulations [40 CFR 122.42(a)] the Discharger must notify the Regional Board as soon as it knows or has reason to believe:

   a. that they have begun or expect to begin use or manufacture of a pollutant not reported in the permit application, or

   b. a discharge of a toxic pollutant not limited by this permit has occurred, or will occur, in concentrations that exceed the specified limits in 40 CFR 122.42(a).

7. **Standard Provisions:** This Order includes all items of the attached "Standard Provisions and Reporting Requirements" dated August 1993. In part, these Standard Provisions require submittal of reports on Safeguards to Electric Power Failure within 90 days of adoption of this Order.

8. **Permit Expiration:** This Order expires September 16, 2003. The discharger must file a report of waste discharge in accordance with Title 23, Chapter 3, subchapter 9 of the California Administrative Code not later than 180 days in advance of the expiration date as application for issuance of new waste discharge requirements.

9. **Effective Date of Permit:** This Order shall serve as a National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Clean Water Act or amendments thereto and shall become effective on the date of adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

10. **Pretreatment Requirement:** The discharger shall obtain the required pretreatment permit from the San Francisco Public Utilities Commission Bureau of Environmental Regulation and Management, and meet all pretreatment requirements promulgated under the City of San Francisco Industrial Waste Ordinance.

11. **Secondarily-Responsible Discharger:** After being notified by the Executive Officer that Astoria has failed to comply with this Order, the U.S. Navy shall try to obtain compliance by Astoria. If compliance is not achieved 60 days after the receipt of the notification letter, U.S. Navy shall then be responsible for complying with this Order.

I, Loretta K. Barsamian, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on September 16, 1998.

Loretta K. Barsamian
Executive Officer

Attachments:

Figure 1 - Facility Location
Figure 2 - Facility Map
Standard provisions and Reporting Requirements, August 1993
Self Monitoring Program - Part A (August 1993), and Part B

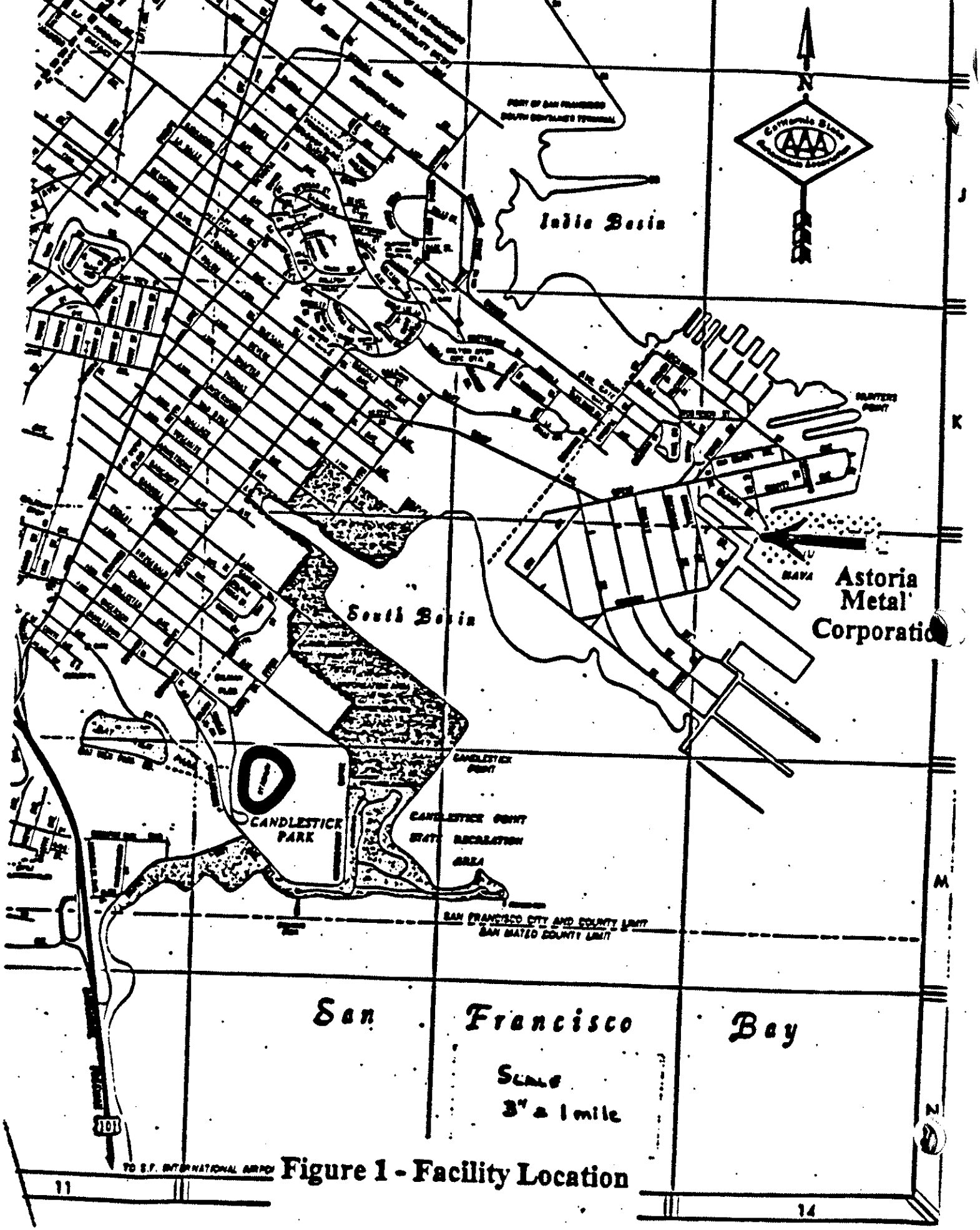

Figure 1 - Facility Location

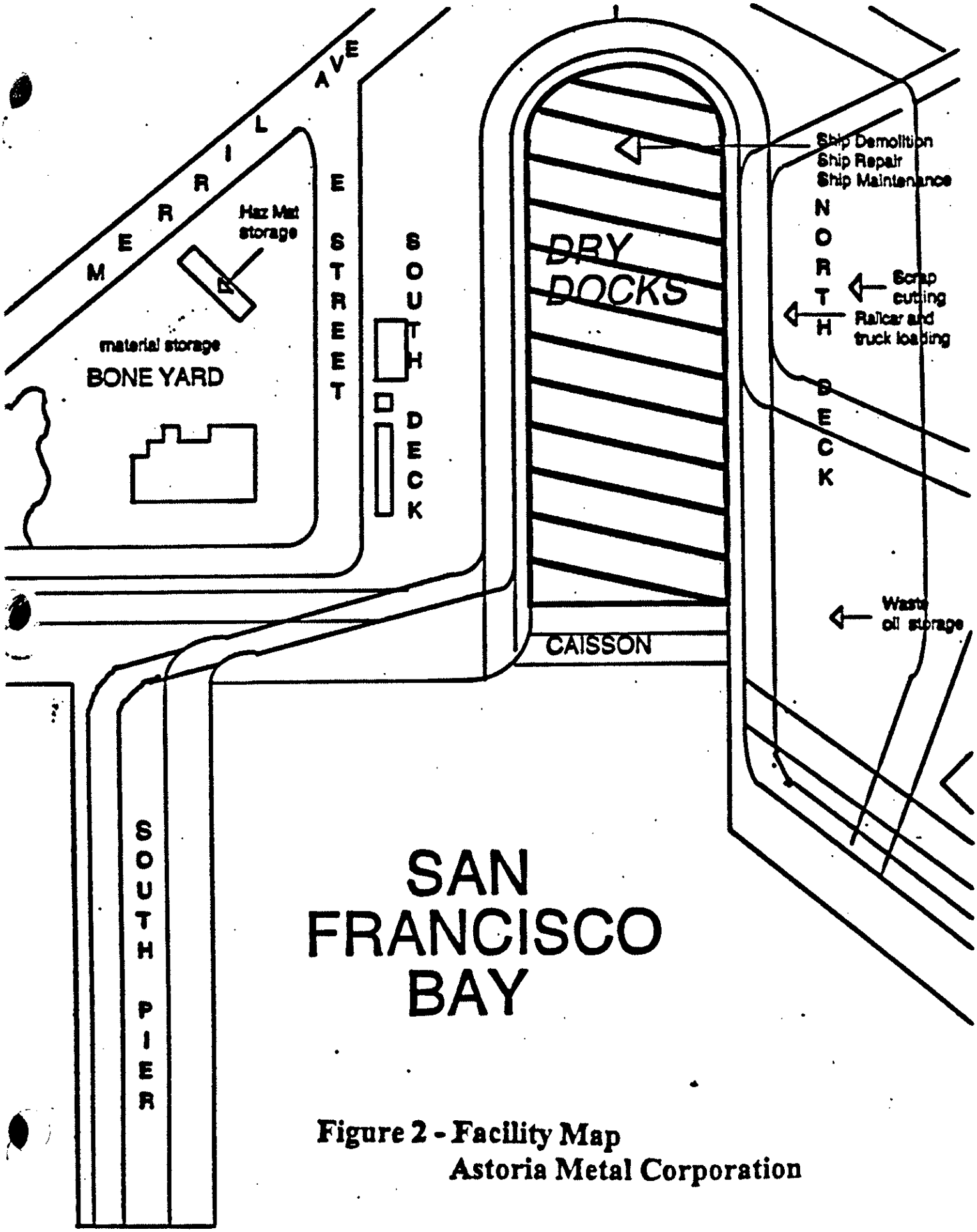

Figure 2 - Facility Map
Astoria Metal Corporation

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

ASTORIA METAL CORPORATION
HUNTERS POINT SHIPYARD
SAN FRANCISCO
SAN FRANCISCO COUNTY

AND

U.S. NAVY
ENGINEERING FIELD ACTIVITY
CARETAKER SITE OFFICE
HUNTERS POINT SHIPYARD
SAN FRANCISCO
SAN FRANCISCO COUNTY

NPDES NO. CA0028282
ORDER NO. 98-101

CONSISTS OF

PART A
DATED AUGUST 1993

AND

PART B
ADOPTED SEPTEMBER 16, 1998

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. EFFLUENT

Station	Description
E-001	At a point in the outfall containing Waste 001 between the point of discharge and the point at which all waste tributary to that outfall is present.

B. RECEIVING WATER

Station	Description
R-001	At a point at the end of South Pier.
R-002	At a point at the end of North Pier.

D. STORMWATER

Station	Description
S-1 thru S-28	Located as labeled on the attached Map.

C. LAND OBSERVATIONS

Station	Description
L-1 thru L-'n'	Located along the facility perimeter adjacent to the water at equidistant intervals not to exceed 200 feet.
D-1 thru D-'n'	Located along the entire floor area of the dry dock at equidistant intervals not to exceed 200 feet.

II. SCHEDULE OF SAMPLING AND ANALYSIS

The schedule of sampling and analysis is given in Table I (attached).

III. MODIFICATION OF PART A

Delete items C.2.a, D.1.e, D.1.f, D.5.b, E.3, E.5, and F.4.c.

IV. MISCELLANEOUS REPORTING

Instead of monthly reports as specified in E.4, self-monitoring reports shall be submitted quarterly in the format specified in Part A of the SMP.

I, Loretta K. Barsamian, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 98-101

2. Is effective on September 16, 1998.

3. May be reviewed at any time subsequent to the effective date upon written notices from the Executive Officer or request from the discharger.

Loretta K. Barsamian
Executive Officer

Attachment:

Table I.	Schedule for Sampling, Measurements, and Analysis
Figure I	Stormwater Sampling Location

TABLE I

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	Detection Limit	E-001			All R Stations		All S Stations		All L Stations	All D Stations
Type of Sample		G	Cont	O	G	O	G	O	O	O
Flow Rate (mgd)	---		E				M(1)			
Settleable Matter (ml/l-hr)	0.01 ml/l-hr	E			E(3)		M(2)			
Oil and Grease (mg/l)	1 mg/l	E			E(3)		M(2)			
Total Suspended Matter (mg/l)	1 mg/l	E			E(3)		M(2)			
Toxicity (% survival)(4)	---	E								
Turbidity (Tu)	1 Tu	E			E(3)		M(2)			
pH (pH Units)	---		E		E(3)		M(2)			
Dissolved Oxygen (mg/l and % saturation)	1 mg/l		E		E(3)					
Temperature (^{O}C & ^{O}F)(5)	---		E		E(3)					
Apparent Color (Color Units)	---		E		E(3)		M(2)			
Aluminum (µg/l)	1 µg/l		E		Q(6)		M(2)			
Arsenic (µg/l)	1 µg/l		E		Q(6)		M(2)			
Cadmium (µg/l)	0.5 µg/l		E		Q(6)		M(2)			
Chromium(µg/l)	5 µg/l		E		Q(6)		M(2)			
Copper (µg/l)	1 µg/l		E		Q(6)		M(2)			
Cyanide (µg/l)	5 µg/l		E		Q(6)		M(2)			
Lead (µg/l)	1 µg/l		E		Q(6)		M(2)			
Mercury (µg/l)	0.01 µg/l		E		Q(6)		M(2)			
Nickel (µg/l)	1 µg/l		E		Q(6)		M(2)			
Silver (µg/l)	1 µg/l		E		Q(6)		M(2)			
Zinc (µg/l)	5 µg/l		E		Q(6)		M(2)			
Phenols(µg/l)	50 µg/l		E		Q(6)		M(2)			
PCB (µg/l)	1 µg/l		E		Q(6)		Q(2)			
Tributyltin (µg/l)	0.001 µg/l		E		Q(6)		M(2)			
Un-ionized Ammonia as N (mg/l)	---		E		E					
Chlorinated Hydrocarbons (µg/l)	1 µg/l	E			E		M(2)			
PAHs (µg/l)	1 µg/l	E			E		M(2)			
All Applicable Standard Observations	---			E		E		M	E	E(7)
Observe for Pollutant Runoff	---							M	E	E

(1) Provide estimated volume and flow rate of runoff.

(2) Sampling shall be conducted monthly. One of the monthly samples shall be collected during the first hour of discharge from the first storm event of the wet season. No sampling is required during a dry month.

(3) These R stations samples shall be taken concurrent with the discharge samples.

(4) The bioassay test shall be a static renewal test using two tests fish species (three-spine stickleback and sand dabs). The discharger may use the Third Edition of the USEPA Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms until otherwise specified by the Executive Officer.

(5) The temperature should be taken at least once every hour.

(6) The sample shall be taken concurrent with the discharge sample.

(7) Prior to the submergence of any portion of the dry dock, adequacy of the cleanliness of areas will be observed, certified and recorded, indicating the dates and times of the dry dock use, observations and submergence. The recorded information shall consist of photographs and written descriptions.

LEGEND FOR TABLES

TYPE OF SAMPLES

G = grab sample
C-24 = composite sample - 24 hour
Cont = continuous sampling
O = observation

TYPES OF STATIONS

I = intake and/or water supply stations
E = waste effluent stations
R = receiving water stations
D = Dry Dock stations
L = basin and/or pond levee stations
S = stormwater monitoring stations

FREQUENCY OF SAMPLING

E = each occurrence	2/W = 2 days per week	2W = every 2 weeks
W = once each week	2/M = 2 days per month	3M = every 3 months
M = once each month	2/Y = once in March and once in September	Cont = continuous
Y = once each year		

5Y = Once every five years
Q = quarterly, once in March, June, September and December

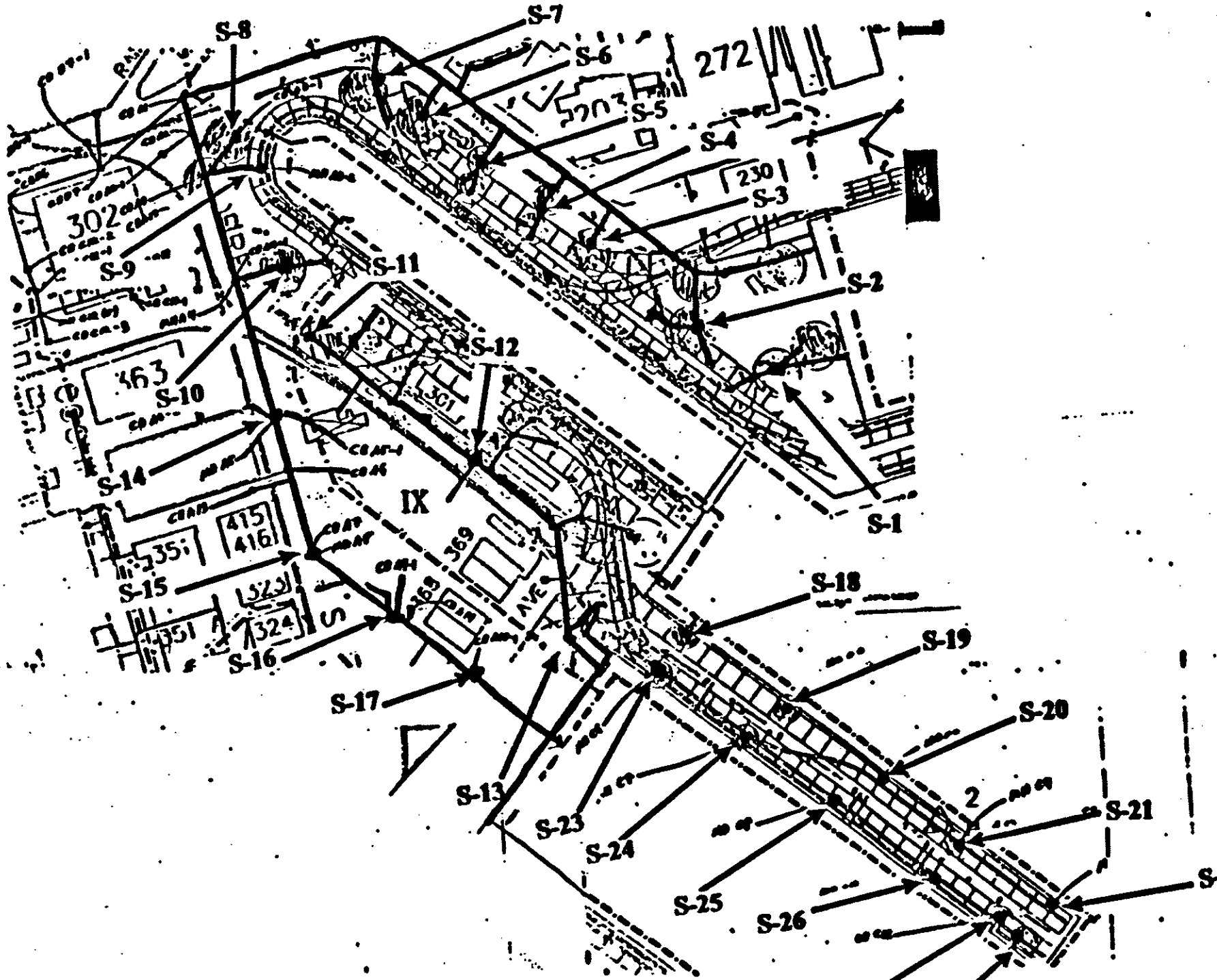

Figure I - Stormwater Sampling Location
For Astoria Metal Corporation